

CLAIMS

5 ^{sub a2} 1. A method of topologically subdividing the project work information included in construction project plans and linking said subdivided plan information to at least one plurality of construction project contracts and/or contracts, to enhance the precision, clarity, specificity and completeness of both said plans and said subcontracts, said plans including at least one plan sheet, comprising the following steps in any operative order:

10 (a) defining a plurality of topological subdivision regions of said at least one plan sheet, each of said plurality of subdivision regions characterizing a selected portion of the scope of work defined by said plans;

(b) linking each of said plurality of subdivision regions to one of a plurality of said contracts;

(c) incorporating said linked region into said contract to define a portion of the scope of work to be performed under said contract.

15 2. A method of subdividing and linking as in claim 1, wherein said topological subdivision defining step includes:

(a) inputting said at least one plan sheet as electronic data to a computer data processing system including a computer-readable memory device;

20 (b) storing said input plan sheet data as a file in computer-readable memory device;

(c) inputting data to said computer data processing system to define at least one of said plurality of subdivision regions of said at least one plan sheet, said subdivision region of said plan sheet characterizing a selected portion of the project work defined by said plans; said portion of said project work corresponding to the work to be performed under a particular one of said contracts; and

(d) storing said definition of said at least one subdivision region as data in computer-readable memory device.

30 ^{sub a3} 3. A method of subdividing and linking as in claim 2, further including:

(a) the step of providing in said computer-readable memory a table defining a plurality of project subcontract work categories, each of said work categories

23/ corresponding to the work to be performed under one of said plurality of subcontracts;
and

(b) the step of linking in said computer-readable memory said at least one subdivision region with a selected one of said work categories, so as to create a data structure correlating said at least one subdivision region with said selected work category.

4. A method of subdividing and linking as in claim 3, further including:

(a) the step of providing in said computer-readable memory at least one subcontract document file;

(b) the step of linking in said computer-readable memory at least said selected work category, thereby including in said data structure a correlation between said selected work category and said subcontract document file, and thereby including in said data structure a correlation between said at least one plan sheet subdivision region and said subcontract document file, so as to characterize a selected portion of said project work to be performed under said subcontract.

5. A method of subdividing and linking as in claim 4, further including:

(a) the step associating in computer readable memory a selected icon file with said at least one subdivision region and said at least one plan sheet;

(b) the step of displaying an image of said selected subcontract document on a display device connected to said computer system, said computer system including a graphical user interface;

(c) the step of displaying said selected icon as an image superimposed upon said subcontract image; and

(d) the step of displaying an image of said subdivision region superimposed upon said plan sheet in response to a selection of said icon using said graphic user interface, so as to characterize at least a portion of the work to be performed under said subcontract by plan information included in said subdivision and plan sheet images.

6. A method of subdividing and linking as in claim 4, further including:

(a) the step associating an index reference with said at least one subdivision region and said at least one plan sheet;

a3 > (b) the step of printing said selected subcontract document with said index reference included in said subcontract document; and

(d) the step of printing an image of said indexed subdivision region superimposed upon said plan sheet, so as to characterize at least a portion of the work to be performed under said subcontract by plan information included in said subdivision and plan sheet images.

7. A method of subdividing and linking as in claim 4, wherein said subdivision defining step includes:

10 (a) defining at least one closed boundary curve coordinated with said plan sheet, said subdivision region comprising the plan area enclosed by said boundary.

8. A method of subdividing and linking as in claim 4, wherein said subdivision defining step includes:

15 (a) defining at least one trace path upon said at least one plan sheet, said trace path delimiting a trace area of said plan sheet lying within a predetermined distance from said path, said subdivision region comprising said trace area.

9. A method of subdividing and linking as in claim 4, wherein said subdivision defining step includes:

20 (a) defining at least one center point upon said at least one plan sheet, said center point delimiting an area of said plan sheet lying within a predetermined geometric boundary shape coordinate with said center point., said subdivision region comprising the plan area enclosed by said predetermined boundary shape.

25 10. A method of subdividing and linking as in claim 4, wherein said subdivision defining step includes:

(a) defining a reference grid coordinate with said plan sheet, said grid dividing said sheet into a plurality of predefined sub-areas; and

30 (b) selecting one or more contiguous ones of said plurality of sub-areas, said subdivision region comprising said selected contiguous sub-areas.

sd 64 > 11. A method of inter-linking as in claim 1, wherein said linking and incorporation is performed electronically and is remotely accessible via an Internet web-server, said plans and said subcontracts being stored in electronic form for rendering and display via said web-server.

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12. A computer data processing system for inter-linking construction project plans to bidding contracts to enhance the precision, clarity and completeness of both said plans and said contracts, wherein the scope of work of said project is defined by said plans, said plans comprising at least one sheet, and wherein said project work is bid by means of said bidding contracts, each of said bidding contracts including an agreement to perform specified portions of said project work, said data processing system comprising:

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(a) a computer-readable memory means for storing at least one plan file including digital image information of said plan sheets;

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(b) a computer display means connected to said memory means for displaying said plan sheet image;

(c) a computer-operator interface means for inputting information to specify a closed boundary on said plan sheet image to define at least one subdivision region of said plan sheet image, said subdivision region corresponding to a portion of the project work defined by said plans;

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(d) a computer processing means connected to said memory means for storing said boundary specifying information.

(e) linking means connected to said memory means for linking said stored plan image and said stored boundary information to at least one bidding contract, so as to define a portion of the project work to be performed under said contract.

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13. A computer data processing system, as in claim 12 which includes a computer program including code for causing said computer system to be accessible by at least one remote user via the Internet.

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14. A computer program product for the inter-linking of construction project plans to bidding contracts to enhance the precision, clarity and completeness of both said plans and said contracts, wherein:

Q4 > (i) the scope of work of said project is defined by said plans comprising at least one plan sheet;

(ii) said project is bid by means of said bidding contracts, each of said bidding contracts including an agreement to perform specified portions of the scope of project work; and

(iii) said computer program product is for operating on a computer system including processor means, memory means, display means and operator input means;

said computer program product comprising a computer usable medium having computer readable program code means embodied in said medium, said computer readable program code comprising:

(a) a first program code means for causing said computer system to read a file stored in said memory means, said file including an image of at least one of said plan sheets;

(b) a second program code means for causing said computer system to display said plan sheet image;

(c) a third program code means for causing said computer system to input operator-specified information to define a boundary around at least one subdivision region of said plan sheet image, said subdivision region corresponding to a portion of the project work defined by said plans;

(d) a fourth program code means for causing said computer system to store said boundary-defining information in said memory means;

(e) a fifth program code means for causing said computer system to link said stored plan image and said stored boundary information to at least one bidding contract, so as to said define a portion of the project work to be performed under said contract.

15. A computer program product as in claim 14, wherein said product includes a sixth program code means for causing said computer system be accessible by at least one remote user via the Internet, said access of said remote user permitting said user to control the execution of at least one of said first through fifth program code means.

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a5 > 16. An electronic business method for construction contract bid and construction management control comprising:

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- a) a website, including at least one of design services, inter-linking of construction project plans for bidding contracts, builder control, and affiliate links;
 - b) a website operation for providing said services to user-subscribers, including input of operator-specific information response to user requests and information and communications to users; and
 - c) a computer data processign system for said interlinking and website operation.

10 17. An electronic business method as in claim 1 wherein;

a) said links include hyperlinks to affiliates providing services under referral or commission fee basis aid affiliate including at least one of owner, developer, architects, contractors, engineers, Surveyors, subcontractors, lenders, insurers, accounting, service providers, legal service providers, and title services.

15 18. An electronic business method as in claim 17 wherein;

a) said operator interactively provides said inter linking services at least one user subscriber including owners, developers, architects, contractors, and subcontractors.

20 19. An electronic business method as in claim 18 wherein;

a) said website includes an operator-managed secure project page accessible through said website for interactive display and rendering of linked plans and contracts, and exchange of e-mail information related to the project plan, bidding and construction phases of a particular project.

25 20. An electronic business method as in claim 16 wherein interaction between and among users and said operator is browser and e-mailed enabled.

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